Getting the Offer: Sex Discrimation in Hiring

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Abstract

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1 Introduction

There are many sources of the gender gap in employment caused by potentially discriminatory actions by employers: In wages for the same job, in hiring, in promotion, and in how wages are set for different kinds of work. Of these, hiring is potentially the most important. With extensive internal labor markets, getting access to good jobs in good firms may have considerable impact on subsequent career development and employment outcomes. But hiring is also where discriminatory behaviors may have the larger latitude, with much scope for prejudice and stereotypes since little information is available at the time of hire. Many analysts agree on this. Lazear (1991, pp. 13–14) writes: "My view is that hiring is most important; promotion is second; and wages are third." Epstein (1992, p. 58) claims "..., most firms prefer to run the risk of litigation with initial hires, instead of with promotion and dismissal." And Olson (1997, p. 61) argues: "...one should expect bigotry to manifest itself more in refusals to hire people than in the self-defeating practice of hiring them only to turn around and fire them."

Yet hiring is perhaps the least understood of these processes. Much has been written about the initial job interview and about tests for selecting candidates, often based on laboratory experiments (see Graves 1999). Some has also been written about conditions at initial hire (Gerhart 1990). But there is limited research using field data on who gets offers of jobs and who does not. A major obstacle is lack of data. One needs information not only about those who receive offers but also about the entire applicant pool allowing comparisons of the two groups. This is difficult to collect and leads one almost invariably to organizational case studies.

Against this background we provide a case study of the hiring process in one of the largest Scandinavian banks, the Norwegian Bank (hereafter DnB). One of the authors worked two years in the hiring department of the organization, where she reviewed applications, sat in on candidate interviews, was present at selection meetings, and worked with, observed, and interviewed the agents making hiring decisions. From the initial "fieldwork" period it became clear that it would be of interest to explore more extensively the final and most central outcome of these processes, namely who gets offers and who does not and any potential sex bias in this. About a year after leaving the job she returned to the organization as a researcher, obtained access

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and permission to quantitatively investigate the hiring outcomes, resulting in the collection of full applicant data for the 15 separate job openings here in focus.

From the initial fieldwork, not reported further here, and for the questions we address of limited added relevance, one thing did however become abundantly clear and which served as a prompt for initiating the present study. Analyses of the interpretations and meanings the hiring agents attach to the hiring situation revealed that the agents are fully convinced and moreover sharply conscious that rather covert and nonconscious processes enter into the hiring decision. These are, according to the agents, biases and gender schemas from which actions flow. And the resulting actions lead, in their view, to undeniable female disadvantage in getting hired.[1]

Extensive social-psychological theorizing on the sources of gender inequality comes to the same conclusion, with an empirical basis derived mostly from rigorous laboratory experiments on undergraduate students at U.S. and European universities (e.g., Nelson, Acker, and Manis 1996). Reskin (2000, p. 327), a sociologist, writes about the sources of discrimination: "I have argued that much of it results from nonconscious cognitive processes." Valian (1998, pp. 2, 22), a psychologists, refers to the sources as "...a set of implicit, or nonconscious hypotheses" or as "the unexpressed and nonconscious nature of gender schemas and their subterranean mode of action..." The hiring agents in the Norwegian organization thus articulate what researchers and also practitioners increasingly have concluded are the central forces behind female disadvantage.[2]

The current study starts where the fieldwork ended. We are not contributing to the social psychological literature on conscious and nonconscious biases. Our focus is rather on assessing the outcomes of the hiring process against the fixed background of awareness of such biases, contributing to the small literature on disparities in hiring outcomes by sex and race. We proceed to ask, What are the outcomes of the hiring process in terms of offers given in this organization? Is there evidence of female disadvantage in getting offers? And what is the role of family situation in getting

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[1]A top-level executive in the company stated emphatically that "We do not discriminate against women, at least not consciously." While both the male and female hiring agents concurred, they insisted on the role of nonconscious biases. In their views, these exert their influence at all stages of the hiring process including the interactions during job interviews.

[2]As one commentator stated to Rimer (2005, p. A15) in a recent front-page article in the *New York Times*: "Everybody has unconscious gender bias. It shows up in every study."

offers? To this end we study all applicants to and offers made for positions in the period June 1997 through December 1998.

The issues have broad relevance and the national setting is of significant intrinsic interest. We believe also to present the first study using applicant pool data and information about who gets offers and who does not in a private-sector European firm, adding a cross-national component to the about half a dozen U.S. studies using such data.

As for the broader relevance, hiring is one important mechanism that may create sex segregation on occupations and firms, where men and women tend to work in different occupations and firms. Segregation rather than unequal pay for same work for same employer is likely the central cause for the gender wage gap (e.g., Petersen and Saporta 2004). Not only the existence of segregation, which has been extensively documented, but also the processes leading to it are in need of investigation, of which hiring to date is the least studied and understood.

As for the intrinsic interest of the regional case, Scandinavia, along with the U.S., is in the forefront in regards to gender equality policies and both have progressive values toward gender equality. Scandinavia lead in the area of family policies, the U.S. in affirmative action and workplace regulation. Scandinavia and the U.S. have similar gender equality legislation, and while enforcement probably is stronger in the U.S., within Scandinavia Norway is the country that spends most resources per inhabitant on enforcing legislation, about twice as much as in Denmark and Sweden (Borchorst 1999, p. 172, Tab. 10.1).

It is difficult to assess the typicallity of the case we present. But the results are not unlike findings in other case studies from Norway, and may indicate that they are representative of broader practices in midsized to large service-sector firms, which usually have formalized human resources functions. The organizational site in banking is an important industry for female employment.

One may object that researchers only gain access to organizations that have fair hiring practices. In our experience, however, organizations rarely know as much about potential discrimination in these processes as the researchers that analyze the data do, and at least for two of the U.S. studies we discuss below, significant disadvantage

to being black was found, but access to data was still given.[3] And the human resource managers in the present oganization were clearly surprised when we presented our results, so we think self selection may represent less of a problem than we might initially be led to believe.

Section 2 outlines the central issues in hiring. Sections 3 and 4 describe the data and the positions and applicants. Sections 5 and 6 analyze female disadvantage in hiring and the impact of family obligations. Section 7 gives concluding remarks.

2   The Hiring Process

The Issues

What are the central issues in connection with hiring and what is the evidence with respect to differential hiring by sex? To these questions we now turn.

Hiring entails at least three distinct processes. The first is how recruitment is done, for example, through newspaper ads, employment agencies, or social networks (e.g., Bloch 1994; Granovetter 1995 [1974]). The second is the process leading up to who gets hired and who gets turned away. This involves selecting candidates for interviews, how interviews and tests are conducted, and choosing whom to offer jobs (Bloch 1994). The third concerns the conditions offered—pay, level, responsibility, fringe benefits, perks, etc. To understand the extent to which differential treatment occurs at each of these nodes, we focus on its documentability, how ambiguous the documentation is, and whether someone can raise charges and pursue illegitimate treatment.

In terms of the recruitment process, discrimination can be difficult to document. For example, suppose there are few qualified available applicants for a position, but the hiring agents know one qualified man in the local labor market. An ad may be placed only in a local newspaper and the man may be encouraged to apply. Qualified female applicants may then not hear about the job. Or if recruitment occurs primarily through referral networks, these may be male dominated, resulting in female disadvantage. So even with no discrimination in who gets chosen from a given applicant pool, there may be discrimination in how the pool gets recruited from

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[3]Even in large universities, with many qualified researchers, knowledge about hiring and promotion practices by sex and race can be limited.

the availability pool. Or if there is discrimination in who gets offers and who does not, this may influence who decides to apply.[4] And there may be steering of potential applicants to specific jobs reflecting sex stereotyping (see Charles and Grusky 2005, chap. 1). These processes can be very difficult to document. It may be especially hard to show discriminatory intent in addition to so-called disparate impact. Complainants may not be available, except perhaps from someone already in the organization.

In terms of who gets offers, discrimination is also difficult to document. All that may be accessible to outsiders is information about those that get hired, but not about the entire applicant pool. And the information is likely ambiguous, open to many interpretations. A complainant is rarely present. Those not hired and possibly discriminated against will seldomly know what occurred, and even when they do, it may be impossible to gather the relevant evidence. Those turned down often have gotten other jobs, leaving few incentives for complaining or filing suits. As Bloch (1994, p. 1) writes: "Employees are far more likely than applicants to file discrimination lawsuits, and damages awarded to them tend to be greater than those received by applicants."

As for quality of offers made it is typically easy to document the identities of the parties hired and their conditions but not the conditions offered to those who declined the offers. There is a clear subjective element in deciding which conditions to offer, because less is known at the point of hire than at later promotion. So disparities in quality of offers may be open to many interpretations.

Hiring thus gives excellent opportunities for discrimination precisely because the processes are hard to document, documentation is usually ambiguous, and a complainant is often lacking (Petersen and Saporta 2004). But hiring may for an altogether different reason be especially susceptible to differential treatment. Recent social-psychological theorizing has stressed that with limited information nonconscious stereotypes and gender schemas are more likely to operate (e.g., Fiske, Bersoff, Borgida, Deaux, and Heilman 1991; Nelson et al 1996; Heilman 1995; see also Valian 1998; Reskin 2000). This may occur even in the total absence of discriminatory intent. Less information is available at hiring than promotion and nonconscious processes may

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[4]We cannot address these issues with our data, nor have other studies done so, with the exception of Fernandez and Fernandez-Mateo (2005) for the availability pool by race, and briefly in Petersen, Saporta, and Seidel (2000).

hence be more salient.[5] The combined forces of an excellent opportunity structure for discrimination and much latitude for nonconscious biases are likely to lead to significant amounts of discrimination at the hiring stage.

Beyond opportunities for discrimination and nonconscious biases come the problem of statistical discrimination in hiring, in that employers may want to avoid hiring women with family situations that could limit their work effort or stability as employees, such as married women and women with children. There is little need to elaborate on the literature on family obligations. Already extensive and complex, it nearly without exception comes to the conclusion that the impact of family obligations on wages and careers is negative for women and positive for men (e.g., Waldfogel 1998; Crompton and Birkelund 2000; Glass 2000). But the role of family situation in hiring specifically has yet to be addressed carefully.[6]

THE RESEARCH EVIDENCE

Research evidence is limited. Some studies address recruitment practices (e.g., Marsden 1994). A considerable psychological literature documents the processes at the pre-offer stage, such as selection interviews and employment tests (Graves 1999), and some address both of these processes (Collinson, Knights, and Collinson 1990). For the process in focus here, who gets offers and who does not, only a handful of studies use data on applicant pools. But such data are essential: one needs access to information on applicant pools and on the choices employers make about whom to hire from these pools. Only such data may provide admissable evidence on whether discrimination occurred.[7]

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[5]While each nonconscious bias may be trivial in isolation, their combined effect need not be, referred to as the cumulation of advantage (see Cole and Singer 1991). As Valian (1998, p. 18) stresses, "a succession of small events, such as not getting a good assignment, result in large discrepancies in advancement and achievement." Or as Bailyn (1999) writes on the status of women faculty at MIT: "...they saw that as their careers advanced something else besides competence came into play, which for them meant an accumulation of slight disadvantages, with just the opposite for their male colleagues."

[6]In a laboratory experiment, where participants were asked to rate application materials for jobs and where applicants differed only on parental status, mothers were rated as less competent than other applicants and were rated as less suitable for hire and promotion (Correll and Benard 2005).

[7]While organizations in many countries keep records on recruitment and hiring processes, these records are often incomplete, often not computerized, and can be difficult to interpret. Compared to promotion decisions, for which at least large organizations routinely keep well-documented computerized records, records on hiring are usually more scanty and less easily available to researchers. The difficulty for some organizations in part arises when they have many applicants for each job. It then becomes costly carefully to document the qualifications of each applicant and costly to enter

This point bears elaborating. Sample surveys of job seekers or job holders and their degree of success provide very limited relevant information. They allow no comparison of the set of job seekers exposed to the same possibly discriminatory employer. They document only the outcomes for atomistically sampled individuals exposed to different employers (e.g., Hanson and Pratt 1995). Other studies sample employers about their strategies for filling jobs and sometimes about the hired employees (Holzer 1996). But again, these yield no information about the entire applicant pool. The search for admissable evidence thus leads one to organizational case studies of entire applicant pools.

Starting with the U.S. evidence, one study, using data on all applicants to a large California service organization in 1993–1994, finds no evidence of female disadvantage in being hired (Petersen, Saporta, and Seidel 2005). Another study, using data on the applicant pool to entry-level positions in a large bank, finds a small positive effect of being female on getting a job offer (Fernandez and Weinberg 1997; see also Fernandez, Castillo, and Moore 2000). Using data from the same company, with a vastly expanded focus on gender differences, Fernandez and Sosa (2005) again report no female disadvantage. A third study uses data on about 35,000 applicants and 3,400 offers in a midsized high-tech company in 1985–1994 (Petersen, Saporta, and Seidel 2000). It finds absolutely no differences between men and women in probability of receiving offers. A fourth study reports a slight female advantage in getting offers to managerial positions in a single department in the federal bureaucracy (Powell and Butterfield 1997). These studies using applicant pool data from recent years, controlling for several relevant variables such as age and education, thus find no evidence of female disadvantage in getting hired.[8]

Goldin and Rouse (2000) use data on applicant pools from the late 1950's through 1995 to positions in eight major American symphony orchestras. Since about 1970 most orchestras have shifted from open to "blind" auditions where the sex of the candidate is unknown. In each of four audition rounds women do worse than men

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this documentation into computerized data bases, as was the case in the company presently studied, where none of the information was computerized.

[8]An earlier study reports on all 20,576 applicants to a large insurance company in 1981 (Kirnan, Farley, and Geisinger 1989). While 26.6% of males are hired only 17.6% of females are. There is no control for education, age, or other personal characteristics in this study. The results may reflect less favorable conditions faced by women in the early 1980s.

under sex-blind while better under open auditions. But in the subset of about five percent of the musicians who auditioned under both open and blind conditions, women do better than men under blind in each of four rounds while better under open conditions in only two. With quality of playing the same under both conditions, this shows disadvantage to women in two of four rounds when their sex is known. What to make of their results depends on how one assesses the two opposite findings and how much weight to attach to an analysis pertaining to a small subset of the women.[9] This is an unusual labor market.

An audit study analyzes sex discrimination in restaurant hiring (Neumark 1996). Matched pairs of equally qualified men and women applied for jobs as waiters and waitresses to the same 65 restaurants in Philadelphia. Men have much higher success in getting job offers in high-priced restaurants where pay is high, with the opposite pattern in low-priced restaurants. Audit studies provide one important avenue for studying hiring discrimination, allowing almost perfect control for observables, which no applicant pool data can. Nor does the applicant pool itself adjust to discriminatory behavior of employers.[10]

Continuing with the Norwegian studies, one study of hiring into tenured jobs among academics showed that in 1980–84 women made up about 14% of the applicants and 13% of appointments, indicating minimal sex discrimination (Fürst 1988). However, focusing on appointments where both men and women applied for the same position, computations that can be made from the data presented but not reported in the study, women have a higher probability of getting an offer: 1 out of 7 women whereas only 1 out of 10 men receive an offer when they compete for the same jobs. The central problem was that there were female applicants to about only 37% of the advertized jobs. A major impediment to more equal representation of

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[9]Of the 7,065 musicians in the data, 367 appeared to have auditioned under both open and blind conditions for a given audition round (see Tab. 5 and n. 38).

[10]The audit studies do however not take into account the sex composition of the entire applicant pool and current employees at the restaurants. With two equally qualified applicants, from the viewpoint of the applicant each should have an equal chance of being hired. But employers may have a different calculus. In deciding whom to hire they will also consider the sex composition of their entire applicant pool and their current stock of employees. Employers may want to achieve same hiring rates for men and women across their entire applicant pool, not necessarily across the sex-balanced pool of applicants in the audit studies. While discriminatory in a given hire situation, and thus in violation of the law, from a broader organizational viewpoint hiring outcomes may still be balanced relative to the sex composition of their applicant pool.

women was that many of the open positions were in male-dominated fields with few potential female applicants.

Another study addresses who gets offers of managerial positions in part of the government sector (Teigen 2002). It finds no disadvantage or perhaps a small advantage to being female. Similar results are shown in Storvik (1999).[11]

We are not aware of comparable studies of hiring in Scandinavian organizations outside Norway. There is however no reason to think that the countries would differ in a major way.

Of the studies reviewed, only the research by Fernandez and collaborators are on a bank, finding little evidence of disadvantage to women. Much has of course been written on banking, given its importance in modern economies, both in Europe and the U.S (e.g., Regini, Kitay, and Baethge 1999). For case studies of banks see for example Carroll and Rubery (1998) on UK as well as Crompton and Birkelund (2000) comparing Norway and the UK. A study of a German bank, which briefly addressed hiring, reports that "recruitment also favored women" Quack (1998, p. 68). Similarly, Villa (1999, p. 169), in a study of Italian banks, reports how the percent of hires who are female have gone up in two Italian banks and is higher among new hires than current employees, but with no data on applicant pools.

The probably most extensive evidence on discrimination in who gets offers comes from laboratory experiments. These studies are conceptually transparent, but may lack external validity for inferring practices in actual hiring situations. Reviewing about 20 experimental studies on sex discrimination in hiring Olian, Schwab, and Haberfeld (1988) conclude the evidence for discrimination is marginal.

In summary, the U.S. studies using applicant pool data for single establishments find no evidence of sex discrimination in hiring. The symphony orchestra study finds some evidence of discrimination against women, for a subset of five percent of the musicians, but then with opposite results for the remaining 95 percent of musicians, where women do worse under blind and better under open conditions, opposite of what one would expect if orchestras discriminated. The restaurant audit study finds clear evidence of sex discrimination.

None of the Norwegian studies reports evidence of sex discrimination. These are

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[11]Teigen (1999) goes through all 381 cases of gender discrimination in appointments in 1985–1994 considered by the Equality Ombudsperson in Norway.

however all from the public sector where conditions for women are held to be favorable (e.g., Hansen 1995). Ours is the first study of hiring in the private sector.

The research record is hence ambiguous and consists of only a handful studies. But the weight of the evidence favors the conclusion that sex discrimination in hiring is limited. This is exactly the opposite of what one would expect on conceptual grounds and opposite of what many analysts have concluded.

As for the role of family situation for female labor market success, much has been written about its impact on wages (e.g., Waldfogel 1998), some on careers, including a careful investigation of the relationship between family obligations and careers in British and Norwegian banking (Crompton and Birkelund 2000), but none to our knowledge on its role in hiring. We thus add to the literature by providing results for the role of family for success in hiring, and we do so in a country which unlike for example the U.S. has extensive family policies facilitating employment for women.

The present case thus contributes to the empirical record in two useful ways. First, it provides a study of hiring outcomes from a part of the world comparable to the U.S., Britain, and Canada in equal opportunity for women but more advanced in regards to family policies. Second, we study hiring in a situation where members of the organization acknowledge existence of nonconscious biases against women potentially leading to disparate outcomes.

3 DATA AND METHODS

We use data from the largest Norwegian and one of the largest Scandinavian banks, employing about 7,400 people, the Norwegian Bank (DnB). Given the results of the initial fieldwork, and given the centrality of the bank in the Scandinavian context, it was decided to investigate further the outcomes of the hiring process in terms of job offers. While the recruitment and selection processes lend themselves perfectly to qualitative investigations, the question of who gets offers and how this might vary by sex leads one decisively to an investigation of the quantitative record.

It is important to understand the particular sequence of our data collection. In the initial and as such unplanned "fieldwork" period one author was an employee of the bank, during which she worked in their hiring department, reviewing files, sitting in on interviews, participating in final decisions, organizing and filing papers, and

so forth. After two years on the job, the author left the bank and entered graduate school. A year later, in discussions with the other author of this article, the decision was made to contact the bank and ask for permission to investigate who got offers and who did not and permission to publish the results. Permission was granted and access was given to the entire written record in connection with the hiring process. This led to the collection of the quantitative data. During this second period she was no longer an employee of the bank, but an independent researcher who had been given access to its records for a specific study on the outcomes of the hiring process.

The subsequent quantitative case study concerns all 866 applicants for 15 distinct positions with 30 offers resulting in 28 hires in the 19-months period June 1997 through December 1998. Of the 15 positions, 13 were chosen primarily to represent managerial and professional jobs. These were complemented with the female-dominated secretary job and the trainee job for young recent college graduates that prepares candidates for managerial careers.

Relevant information was collected from the newspaper ads for the jobs, the application letters, the resumes, and the notes made by the hiring agents about outcomes, with about 3,500 pages providing the data input. Coded variables include age, sex, total experience, total relevant experience, nationality, first language, marital status, number of children, years of education, type of education (e.g., degree and field), grades, institution of education, whether the applicant was internal to the bank, job applied to, whether the applicant fulfilled the advertized requirements for the job, whether an offer was given, whether it was accepted, and more.

Descriptive statistics and logistic regression analysis are used to describe the outcomes of the hiring process.

4 POSITIONS, APPLICANTS, AND SCREENING PROCEDURES

POSITIONS

Table 1 lists the 15 positions the bank advertized, documenting the educational and experience requirements for the positions, the personal qualities sought, and so forth. The positions are diverse, ranging from secretary to analyst to managerial jobs (nos. 14, 8, 2, 3, 6, 13). With the exception of the secretary position (no. 14), these are traditionally male-dominated professional and managerial jobs in which women

are held to be at most disadvantage. Positions 1, 2, 4, 6, 7, 11–13 may be viewed as asking for qualifications and interests stereotypically more common among men than women, such as computer skills and interest in stock market, whereas positions 9 and 10 are perhaps more tilted toward stereotypically female skills, such as good oral and writing skills. The number of offers given were: in positions 1–10, one in each, in positions 11–14, two in each, and in position 15, 12 offers. Of the 30 offers, 28 were accepted.

(Table 1 about here)

APPLICANTS

Table 2 gives the data on applicants, first for all, then for those without an offer, and finally for those with an offer, reported for the sexes combined and separately by sex. The central results are these. Of the 866 applicants, 37.9% are female, 91.1% are Norwegian, and 3.5% received an offer. The average age is 29 years, 48.4% are single, and on average they have 0.4 children. The position receiving the highest number of applicants is trainee, 45% of applicants, an attractive job. An entire 32.3% of the females applied for the secretarial position with only 1.1% of men doing so.

(Table 2 about here)

As noted, the bank has an internal labor market, and while only 2.1% applicants are internal, they receive an entire 16.7% of offers. Of the 18 internal applicants 16 are male, of whom 3 received an offer, while the two female internal applicants both received an offer (in positions nos. 7, 13), corresponding to offer rates of 18.8% among men and 100% among women.

From the newspaper ads for each position we coded the proportion of advertized qualifications—some required, some just desired— that the applicant matched. Excluding the positions with either no (nos. 1, 11) or almost only (no. 14) female applicants, women were on average more qualified than men in 6 of the positions, equally qualified in 2, and less qualified in 5, but the differences in qualifications were very small. On average across these positions the proportion of qualifications matched was .88 for men and .91 for women. The bank made offers to several applicants that did not match advertized qualifications well, so there is no necessary

relationship between qualifications and getting an offer.

Only 37.9% of the applicants are female, whereas some 47% of the Norwegian labor force is female, both overall and in banking specifically. This underrepresentation of women may reflect that many of the jobs are in typically male occupations. There is clear segregation on jobs applied to. In the five positions asking for interest in stock market and/or computer skills, here excluding the secretary positions, there are no female applicants in two (nos. 1, 11) and less than 20% females in the remaining three (nos. 4, 12, 13). There are almost only female applicants in one job (no. 14), the secretary position, a female-dominated job, and both offers went to women. In jobs asking for "good oral and writing skill" (nos. 9, 10), the percent female among applicants are 36.4 and 46.2, and both offers went to women.

The sex segregation on jobs applied for may reflect broader norms of stereotyping. It may also be indicative of problems at the recruitment stage or in how the applicant pool for some of the jobs gets constituted. It could be that the organization fails to identify and attract qualified females from the wider availability pool. But females could also be steered away from certain jobs. On the other hand it could reflect lack of qualified women for some of the jobs or that women to a higher degree than men find some jobs less appealing. With our data we are not in a position to address these processes. Our concern here is however with what happens to the pool once it has been constituted, not how it gets constituted.

SCREENING PROCEDURES

Although our interest is in the final outcome of the process, whether an offer is extended or not, it is helpful for situating our results to provide some details on the screening and selection procedures. Once applications have been received, a hiring consultant in the organization and/or supervisor of employing unit goes through every application two or three times. Attention is first paid to whether there are qualified internal applicants, and second that no qualified female applicants are overlooked. The applicants who are broadly found to provide a good fit, partially based on formal qualifications and partially on relevant experience, are then called in for a first interview. It lasts 45–60 minutes and is conducted by the consultant. To counterbalance the subjective nature of the interview an hour-long computer-based personality questionnaire is next administered, followed by a 20-minute debriefing

between applicant and consultant discussing the results. The test is developed by an international human resources company, Saville & Holdsworth Ltd, and assesses orientations to relationships, thought style, and emotions. A subset of the most promising candidates are next identified and their references are called. About one in three of those who had a first interview are called in for a second interview, which is conducted by the consultant and the supervisor in employing unit. The goal is to assess fit with unit and career and professional interests. Occasionally a third interview is made. The consultant then makes a recommendation with respect to whom to hire, while the supervisor decides whether the recommended candidate is suitable for the position. The consultant together with the hiring committee make the final decision about whom to extend offers to. They also clarify why a particular candidate was chosen and decide the conditions of the offer.

5   Female Disadvantage?

Hiring Patterns by Position

What is the evidence for possible female disadvantage in hiring? Table 3 presents the main data. In Panel A, separately for each position, columns 1–5 pertain to all applicants, giving the number of applicants, the percent female, the number of offers extended, the percent with offers, and finally the percent of the offers going to females. Columns 6–8 give the number of male applicants, the number of men with offers, and the percent of the men who received an offer. Columns 9–11 give the corresponding statistics for women. Panel B gives the same statistics but at a more aggregate level, namely for various groupings of positions, with positions grouped together according to two criteria: first the absence versus presence of female applicants and second the number of offers given in each position. As hiring occurs for specific positions, each with a given number of openings, and each with a limited set of applicants that are evaluated, one needs to pay careful attention to what occurs in the various positions, not relying on overall comparisons or grouping together positions that are not comparable with respect to likelihood of getting offers. This results in considerable detail in the analysis, but there is no satisfactory alternative.

(Table 3 about here)

14

Focus first on Panel B. The first line, for all positions and all applicants, shows that 37.9% of applicants are female, while 36.7% of offers were issued to women, consistent with a slight bias against women. But a necessary condition for receiving an offer is that one applies. In the second line we have excluded from the computation the two positions (nos. 1, 11) with no female applicants, and now see that 38.7% of the applicants are female while 44.0% of the offers went to women. There appears to be a small advantage to being female. An entire 32.3% of the women applied for the secretary position, while only 1.1% of the men did so, a relatively low-level female-dominated position, and with only two offers given, the probability of a male receiving one is very small. Excluding also this position (no. 14) from the computations, leaving the more managerial and professional positions where women are thought to be at the highest disadvantage, 30.2% of the applicants are female while 36.0% of the offers are given to women. Again, there is a female advantage.

Focusing on each position, in Panel A, the pattern is much the same. Positions 1 and 11 had no female applicants, so no comment is needed. In each of positions 2–10 one offer was given. For positions 2–5 the percent female among applicants ranged from 7.1 to 19.1 and no women were given offers. For positions 6–10 the percent female among applicants ranged from 21.4 to 46.2 and four of the five offers (80%) were given to women, even though they constitute less than 50% of the applicant pool. With a sufficient number of females in the applicant pool it appears that the organization actively seeks to appoint women.

Focus next on positions 11–14, with two offers given in each. Ignore position 11 with no female applicants and position 14 with almost no male applicants. From Panel B, next to last line, we see that in positions 12–13 women made up 14.3% of applicants and 25.0% of those with offers. In the secretary position (no. 14), both offers went to women.

In the coveted position as trainee (no. 15), 12 offers were given. Women made up 34.6% of the applicants and 33.3% of those with offers, receiving exactly one third of the offers, 4 out of 12. [12]

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[12]A study of a German bank shows female advantage for hiring into a trainee position. For 97 male and 84 female applicants to the position in 1990–1992, 27.4% of women and 19.6% of men were invited for interviews, while the offer percentages were 14.3 for women and 10.3 for men (Quack 1998, pp. 68–69).

One may learn considerably more from these data by comparing the number of women who received offers to the probabilities of women receiving offers under the assumption that women and men have equal chances of receiving one. One needs to take into account the different proportions of women applying to the positions and the different number of offers given. This involves an exercise in combinatorial statistics. It is conceptually straightforward but can be computationally tedious, where equal opportunity probabilities were generated by computer simulation. The core idea is that the sex composition of the applicant pool likely affects the sex composition of who gets offers, at least if there is equal treatment by sex. We have no information on the sex composition of the employees already in similar positions in the bank.

Consider positions 2–10, where 1 offer was given in each. With equal treatment of men and women, the probabilities of women receiving 0, 1, 2, 3, or 4 offers in the nine positions are then .073, .233, .314, .235, or .108.[13] Women received 4 offers, with a probability of .108. The probability of women receiving 5 or more offers is .038, while for receiving 4 or fewer offers it is .962. In a formal statistical test, one cannot reject the null hypothesis that women have an equal or a higher probability than men of getting an offer against the alternative that women have a lower probability (P-value=.962). To repeat: The null hypothesis of no sex difference or a female *advantage* cannot be rejected.

Consider next positions 12 and 13, where 2 offers were given in each. If women have a probability of receiving an offer equal to their proportion in the applicant pool, then in position 12 the probabilities of 0, 1, or 2 offers given to women are .822, .174, and .004. No women received an offer, which was the most likely outcome, a probability of .822. In position 13, the probabilities of 0, 1, or 2 offers given to women are .686, .294, and .012. One woman received an offer, not the most likely outcome, with a probability of .294; the most likely outcome being 0 offers with a probability

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[13]For the five outcomes of 0, 1, 2, 3, or 4 offers given to women one needs to compute the sums of respectively 1, 9, 36, 84, and 126 probabilities (and exactly the same number of probabilities for the five outcomes of 9, 8, 7, 6, and 5 offers given to women). Each of those altogether 256 probabilities obtains as the product of 9 separate probabilities, defined by the proportion female among applicants for each position, given in column 2 of Table 3. We computed this analytically for 0, 1, 2, and 9 offers and then by simulation for 3–8 offers, making 4 billion draws from the probability distribution defined by the proportion female applying to each job.

of .686. Across the two positions 12 and 13, the probabilities of women receiving 0, 1, 2, 3, or 4 offers are .564, .361, .064, .011, and .00005. The most likely outcome is 0 offers given to women, while the outcome that occurred of 1 offer has a probability of .361. In a formal test, one cannot reject the null hypothesis that women have an equal or a higher probability than men of receiving an offer against the alternative that women have a lower offer probability (P-value=.925).

Consider finally position 15, where 12 offers were given. The probabilities of women receiving 0, 1, 2, 3, 4, and 5 offers are .006, .037, .109, .195, .237, and .204. Women received 4 offers, the outcome with the highest probability. This is the outcome one would expect under equal treatment.

No matter how one looks at it, there is no evidence that women receive fewer offers than they would have received with equal treatment. A conservative conclusion is that there is no difference in hire probability by sex. There is even evidence that women received more offers than what is dictated by equal treatment, and that women thus are favored in the hiring process.

MULTIVARIATE ANALYSIS

We also conducted multivariate logit analyses with whether an offer was given (=1) or not (=0) as the dependent variable. This provided only marginal added insight relative to the results already reported in Table 3, and we here just summarize the main findings without reporting the full table (available from authors upon request). The 15 positions were grouped in the same way as in Panel B in Table 3, and for each of the 9 groupings 15 separate models were estimated, reflecting different permutations of other control variables, such as relevant experience, education, type of education (business, law, etc.), extent to which the applicant matched the advertized job requirements, yielding altogether 134 estimated coefficient; only one of the 135 (=9×15) possible sex coefficients was not possible to compute due to failure of convergence of model.

An entire 113 of the 134 estimated sex coefficients show a positive effect of being female. For the remainder of this discussion, focus on the most relevant of the nine groupings of positions, the one which excludes positions with either no (nos. 1, 11) or almost only (no. 14) female applicants. The results are unambiguous: In *each* of the 15 estimated models, the effect of being female on the hire probability is positive. From

the logit coefficients we estimated the offer probabilities, net of the other variables. Evaluated at a male offer probability of .035 (the proportion of males with an offer), the female offer probability is higher in each of the 15 models, ranging from .045 to .069, a third to as much as twice as big as the male offer probability.[14] The female net advantage increases, rather than decreases, when we control for the degree to which an applicant matches the advertized requirements for a position.

In summary, the tabular statistics and the multivariate analyses both show no female disadvantage in getting an offer. There is arguably evidence of a female advantage, when one focuses on the jobs with both male and female applicants. This holds also when one controls for education, type of education, age, experience, the extent to which the requirements for the position are satisfied, and whether the applicant was internal versus external. The pattern of sex coefficients is very consistent, 84% of the female effects are positive, and in the most relevant of the 9 groupings of positions, the female coefficient is positive in each of the 15 models.

6   Role of Family Status

Turning finally to the role of family status, for each sex we report the percent with job offers separately by marital status and separately by number of children. We also performed logit analyses with whether an offer was received or not as the dependent variable, separately for men and women as the effect of marital status most likely varies by sex, but this yielded no additional insight and is not reported.

Table 4 gives the results. Panel A pertains to all applicants and positions, Panel B excludes positions 1 and 11 with no female applicants, and Panel C additionally excludes the secretary position (no. 14) with almost only female applicants. In all three panels of the table, among single applicants women are given offers at a much higher rate than men, but among married and cohabitating applicants men receive offers at a higher rate. About 50 percent of the applicants are single.

Turning to the role of children, most of the applicants have no children, 69.6% of

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[14]These probabilities were computed as follows. The reference probability for men with the given set of characteristics was set to $P_M = .035$, yielding a male logit of $L_M = \ln[.035/(1 - .035)] = -3.31678$. The logit coefficient for being female is b_F, its value varies between models, yielding a logit for women with the same characteristics as the male comparison group of $L_F = -3.31678 + b_F$. To get the corresponding hire probability for women, one takes the anti-logit of L_F, namely $P_F = 1/[1 + \exp(-L_F)]$.

the men and 59.5% of the women. Among those with no children, women are more likely than men to receive offers irrespective of which panel is considered. Having one child increases the offer rate for both sexes. Among applicants with one child, women are somewhat less likely to get offers than men in Panels A and B, but in Panel C, where the positions with no female applicants (nos. 1, 11) and the secretary position with almost no male applicants (no. 14) have been excluded, women are more likely than men to receive offers. No applicants with two or more children received an offer.

(Table 4 about here)

In summary, the results show that marital status has the opposite effects for men and women on getting an offer. Being married increases the likelihood of an offer for men, while decreases it for women. Offers are extended at a higher rate to single women than single men, but at a lower rate to married women than married men. This is as one should expect from the literature on the impact of family obligations. Whether the difference is due to statistical discrimination against married women we cannot determine. Having one child increased the likelihood of an offer for both sexes. For these applicants, the offer probability is higher for men than women in two of the panels, but when the positions with no female applicants and with almost no male applicants were excluded from the computations, as they arguably should, women have a higher offer rate.

7   Conclusions, Discussion, and Research Agenda

Summary

We are left with two pieces of evidence. The first is where we started, the interpretations and universe of meanings related to hiring. The hiring agents in the studied organization are fully conscious and concerned about the nonconscious biases and gender schemas they carry when making hiring decisions. While conscious about the existence of schemas, they have not articulated what these are, which is not surprising, they are after all nonconscious. But their effects, according to the hiring agents, are considered to be beyond dispute: Women are at a clear disadvantage.

The second piece of evidence comes from our analysis of actual hiring practices. Here we found the opposite to be true. At a minimum, there is no difference in hire

probability by sex. There is even evidence that women are at an advantage in getting offers, and no evidence of a pro-male bias. It appears that female appointments are actively sought in many of the positions. The few other studies of hiring in Norway and the U.S. show similar results: Little or no female disadvantage in getting offers, with the exception of the U.S. symphony orchestra and the restaurant audit study.

We also reported on the role of marital status. It has the opposite effects for men and women. Being married increases the offer percentages for men, while decreases it for women. Among single applicants, women receive offers at a higher rate than men, while among married and cohabitating applicants the female offer rate is lower than the male. This is as one should expect from the literature on the impact of family obligations. Whether this is due to discrimination against married women relative to single women or to family adaptations we cannot determine.

Among applicants without children, women receive offers at a higher rate than men. Having one child increased the offer percentages for both men and women, but more so for men. Among applicants with one child, men had higher offer rates in two of three comparisons, but in the most relevant comparison, where the positions with no female applicants and almost no male applicants had been excluded from the computations, women received offers at a higher rate than men, quite surprisingly.

As discussed in the introduction, hiring is one central node in the employment relationship that may generate occupational sex segregation. In the present firm, however, the opposite occurs: Since women receive offers at a higher rate than men the offer stage of the hiring process decreases rather than increases the sex segregation found among applicants.

DISCUSSION

We are faced then with two central facts: First, the awareness among the hiring agents of nonconscious bias against women, which they believed resulted in female disadvantage, and second the apparent total lack of female disadvantage and even slight female advantage in getting offers. We therefore need to ask, Why are the interpretations and meanings the agents attribute to the hiring process so at odds with what actually occurs? We can only offer some speculations.

First, in interpreting the hiring patterns it could be that the agents in the organization fell victims to cognitive biases in quantitative reasoning. As documented in

the cognitive psychology literature, biases in understanding statistics and probability are common (e.g., Kahneman and Tversky 1979; Johnson et al. 2000). Second, they may just be repeating larger societal views and interpretations about gender inequality, that women are disadvantaged, without considering the specific situation in this organization. Third, the hiring agents may have internalized the results from recent social-psychological theorizing. Through attending an employer-sponsored day-long seminar on achieving gender equality they were exposed to the role of nonconscious biases. Fourth, this may be a generational issue (Petersen and Meyersson 1999). All the hiring officials grew up and had their worldviews formed in the period when gender equality issues in employment had their political breakthrough, in the 1960s and 1970s. But now, 20 to 40 years later, they may still hold views formed and certainly correct when they were younger—that women are at a major disadvantage—and presently being in positions of power, they may also act on those views, by perhaps trying to compensate for the perceived disadvantages.

But why did women come out better than men? It could be that awareness of nonconscious biases led the hiring officials to overreact, to compensate for suspected biases, perhaps even engaging in reverse discrimination. It could be that they just react to broader public discourses about major female disadvantage in employment, again, overcompensating by giving women better opportunities. But the organization also had in place affirmative-action procedures: They search actively for qualified female applicants in the pool. If no qualified females were found in the first pass at the pool, they go through it a second and third time hoping to find one. But it could also be that the women through the job interview were judged to be better prospective employees than the men, and thus should be given offers at a higher rate.

This suggests at least two organizational remedies against the threats of gender schemas and biases, with relevance for Scandinavia, Europe elsewhere, North America, and Australia. One is to educate those in charge of hiring about nonconscious biases, keeping in mind that they may overcompensate. This would involve educating the agents about different types of biases, in attributions, evaluations, and more. One would also have to document how such biases operate and what can be done to combat them. Another remedy is to have in place procedures that try to identify qualified female applicants. This would include ways of attracting qualified female

applicants from a broader availability pool and procedures for ensuring that women who apply are not overlooked. These two organizational remedies may help overcome any disadvantages, and perhaps as in the present case, even more than overcome, possibly leading to a small female advantage. Added to this comes the role of accountability and even rewarding hiring agents and units that succeed in attracting women (Bielby 2000). When the relevant units within an organization are held accountable for hiring, promotion, and compensation decisions, the likelihood of gender equality in outcomes increases.

To the extent that the organization studied faces a problem it may be in how the applicant pool gets constituted. It resulted in clear sex segregation in terms of percent female applicants and the types of positions they applied for. Applicants are drawn from a broader availability pool of qualified potential employees, and the sex composition of the latter will clearly influence the sex composition of applicants. But so may also recruitment procedures, over which an organization has control. For example, Rees and Schultz (1970) reported how an employer advertized in Polish-language newspapers in order to avoid getting black applicants. More recently, in 1999 the Norwegian dairy and food company *Tine* advertized for persons "Effective managing and optimal operation..", attracting only 2 females among 30 applicants. After consulting several female managers the positions were readvertized with the words "effective" and "optimal" removed. This generated an applicant pool with 50% females. All hires ended up being female (see *Dagens Næringsliv* 1999*a*, 1999*b*). Even with no discrimination in who gets an offer, there may be discrimination in how the pool gets recruited from the availability pool. There may also be steering of potential applicants to specific jobs reflecting sex stereotyping (Charles and Grusky 2005, chap. 1). Whether this is case or not in the current organization we do not know. We can only note the sex segregation of the applicant pool.

In spite of extensive family policies in Norway aimed in part at facilitating employment for women, even the process of getting an offer from a large employer seems to be structured by one's marital status and differently so for men and women. One may expect family status to play an even larger role in subsequent promotion. But in another respect the family policies appear to have succeeded. Surprisingly, having one child has a positive effect on the offer probability for both women and men, not

only for men as one should expect, and in the most relevant comparison, mothers have a higher offer rate than fathers. Being married is thus detrimental to women relative to men, but having one child is not and can even be advantageous. A central goal of Scandinavian family policies has been to remove the impact on labor market outcomes of having children (Leira 2002, chap. 4), and the goal seems here to have been achieved. Not only is there no disadvantage for women, there may even be a small advantage of having children both relative to other women and relative to men.

What is then the current situation, in the family-friendly corner of the world, for women in hiring in midsized and large Norwegian and perhaps even Scandinavian organizations? On this we can only speculate, given the paucity of studies. What we found is however similar to results in Fürst (1988) on hiring of faculty in Norwegian universities and Teigen (2003) on getting offers to managerial positions in the government (see also Storvik 1999). The evidence there is suggests no female disadvantage in getting hired. We are not aware of similar evidence from other Scandinavian countries. The U.S. evidence, also from only a handful of studies of organizations with relatively formalized and sophisticated human resource functions, points in the same direction (see Fernandez and Weinberg 1997; Fernandez and Fernandez-Mateo 2005; Petersen, Saporta, and Seidel 2000, 2005).

Implications for Research Agenda

What are then the central challenges in research on the role of hiring in creating sex and race inequality?

An almost untapped research question is the role of recruitment procedures. Of pivotal concern is how an applicant pool gets constituted from the availability pool, and whether the sex and race compositions of the former reflect the latter. An interesting site can be here found among research universities, some of which are starting to pay careful attention to the match between applicant and availability pools by academic fields, and may even halt a search if there is major discrepancy. On this topic much research is needed.

There is still much to be learned from studying the role of potential bias in initial selection procedures, for example, in how short-lists of candidates are constructed, and with respect to what happens in candidate interviews, the extent to which male applicants are better at projecting a competent image, or better at negotiating, or

are better treated in interviews. Much research has already been done here, both in the laboratory and in the field, but several aspects are still in need of further elucidation.

From a social inequality viewpoint, however, the central challenge for research now is assembling the relevant data: First of all from field studies of entire applicant pools and on the choices employers make about whom to hire from these pools, and secondly and more partially, but also with stricter controls for relevant variables, from audit studies. Only such applicant pool and audit data will provide admissable evidence on potential discrimination with respect to who gets offers and who does not.

There is a question of how many case studies need to be assembled before the record can be considered convincing. To this there is probably no clear answer, but it is probably equally clear that research is a long distance from reaching a saturation point in data collection, with respect to both the number and types of organizations studied. A central concern for the researcher is the selection of organizations to be studied. In conducting case studies of hiring one has much less control over data collection than in large sample surveys. Rather than selecting cases strategically, one often needs to settle for what is offered through personal and professional network ties to organizations with high-quality records of hiring. Not an ideal situation, but difficult to avoid since any study requires significant cooperation in releasing and understanding the data.

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Table 1
Description of Formal Requirements for Each Available Position as Formulated in the Ads

Position	Education 1	Experience 2	Personal Qualities 3	Other 4
1 Product Developer	College/University Business and Tech.	Yes	None	Interested in Stock Market
2 Marketing Manager	College/University Marketing or Business	Experience from Marketing or Financial Products pref.	Industrious, Good Communication Skills	Good Business, Social and Quantitative Knowledge
3 Sales Manager	College/University Business/Marketing	3-5 Years Sales Experience Leader Experience	Structured, Targeted, Independent, Creative, Sales-oriented, Outgoing, Co-operative	None
4 Client Supporter	Bachelor Marketing or equivalent	Not required, but can weigh up for lack of education	Positive Attitude, Energetic, Outgoing, Service Minded	Knowledge of Stock Market, Computer Skills
5 Consultant in Risk Management	Min. 4 Years College/University Math or Business	Preferred	Responsible, Analytical, Informal, Co-operative, Structured, Independent	None
6 Marketing Manager	College/University Business	None	Outgoing, take Initiative, Sales Oriented	Good Knowledge of Electronic Distribution and Dialogue Marketing
7 Administration and Internal Control Manager	College/University Business	Preferred	Analytical, Stress Tolerant, Systematic, Accurate, Independent	Good Knowledge of Financial Instruments
8 Finance Consultant	Min. 3 Years College/University Business	None	Patient, Accurate, Responsible, Industrious	Know Word and Excel
9 Journalist	College/University	Yes Journalism/Inform.	Independent, Team Worker	Good Oral and Writing Skills
10 Senior Consultant	College/University Master Business	Wide Experience in Business/Accounting and performing Presentations	Analytical	Interested in Accounting and Budgeting Good Oral and Writing Skills
11 Administrator of Orders	3-5 Years College/University Business	Min. 2 Years	Analytical, Independent, Service Minded, Take Initiative	Computer Skills
12 IT Consultant	None	2-4 Years Experience from Operating Machine Park Exp. from Project Mgt pref.	Independent, Responsible, Industrious	Interested and Knowledge of Stock Market, Good English
13 Sales Manager	Min. 4 Years College/University Business	Leader and Sales Exp.	Good Communication Skills, Inspiring, Structured	Computer and Technology Skills
14 Secretary	None	None	Service Minded, Stress Tolerant	Computer Skills
15 Trainee	College/University	None	Outgoing, Independent, Initiative	Interested in Career in Firm

Note: The information was assembled from the newspaper ads for the positions. In each of positions 1-10, one offer was given. In each of positions 11-14, two offers were given. In position 15, 12 offers were given. Of the 30 offers made, 28 were accepted.

Table 2

Demographic and Other Characteristics of All Applicants, of Applicants Not Offered a Job and of Applicants Offered a Job

	Variable		All Applicants			Not Offered a Job			Offered a Job		
			All	Men	Women	All	Men	Women	All	Men	Women
			1	2	3	4	5	6	7	8	9
1	Female	%	37.9			37.9			36.7		
2	Offered a job	%	3.5	3.5	3.4						
3	Hired	%	3.3	3.4	3.1				93.3	94.7	90.9
4	Age	Mean	29.2	28.6	30.2	29.2	28.5	30.2	29.9	28.5	30.2
5		SD	7.2	7.0	8.2	7.2	6.3	8.2	6.4	6.4	8.2
	Nationality:	%									
6	Norwegian		91.1	90.5	92.4	90.8	90.1	92.1	100.0	100.0	100.0
7	Swedish/ Danish		3.3	3.2	3.0	3.4	3.3	3.2	0.0	0.0	0.0
8	Other		5.6	6.3	4.6	5.8	6.6	4.7	0.0	0.0	0.0
	Residence:	%									
9	Urban		46.9	45.3	49.4	46.7	45.1	49.2	53.3	52.6	54.6
	Civil status:	%									
10	Married		18.4	16.6	21.0	18.4	16.4	21.5	16.7	21.1	9.1
11	Divorced		1.7	1.3	2.4	1.7	1.4	2.2	3.3	0.0	9.1
12	Cohabitant		15.8	15.1	17.1	15.6	14.7	17.0	23.3	26.3	18.2
13	Single		48.4	52.6	41.8	48.6	53.2	41.3	43.3	36.8	54.6
14	Children:	Mean	0.4	0.3	0.4	0.4	0.3	0.4	0.2	0.3	0.4
15		SD	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.8
	Position:	%									
16	Product Dev.		0.9	1.5	0.0	0.8	1.4	0.0	3.3	5.3	0.0
17	Marketing Mngr.		1.6	2.4	0.3	1.6	2.3	0.3	3.3	5.3	0.0
18	Sales Manager		1.7	2.4	0.6	1.7	2.3	0.6	3.3	5.3	0.0
19	Client Supporter		3.2	4.3	1.5	3.2	4.3	1.6	3.3	5.3	0.0
20	Consultant R/M		5.4	6.9	2.7	5.5	7.0	2.8	3.3	5.3	0.0
21	Marketing Mngr.		1.6	2.1	0.9	1.6	2.1	0.6	3.3	0.0	9.1
22	Adm/IC Manager		0.8	0.9	0.6	0.7	1.0	0.3	3.3	0.0	9.1
23	Finance Cons.		10.3	11.6	7.9	10.5	12.0	8.2	3.3	5.3	0.0
24	Journalist/Info		8.9	9.1	8.5	9.1	9.5	8.5	3.3	0.0	9.1
25	Senior Consultant		1.5	1.3	1.8	1.4	1.4	1.6	3.3	0.0	9.1
26	Adm. of Orders		1.3	2.1	0.0	1.1	1.7	0.0	6.7	10.5	0.0
27	IT Consultant		2.7	3.7	0.6	2.5	3.5	0.6	6.7	10.5	0.0
28	Sales Manager		2.1	2.8	0.9	1.9	2.7	0.6	6.7	5.3	9.1
29	Secretary		12.9	1.1	32.3	13.2	1.2	32.8	6.7	0.0	18.2
30	Trainees		45.0	47.6	41.2	45.2	47.8	41.3	40.0	42.1	36.4
31	Education High	Mean	7.7	8.1	7.1	7.6	8.2	7.1	7.3	8.1	7.1
32	School Up a	SD	2.6	2.2	3.0	2.6	2.2	3.0	2.6	2.2	3.0
33	Part Time /	Mean	20.1	20.7	19.2	19.9	20.5	19.2	23.7	20.7	19.2
34	Summer Job b	SD	18.7	18.4	19.3	18.7	18.3	19.3	19.1	18.4	19.3
35	Work Experience	Mean	4.6	3.7	6.0	4.6	3.7	6.0	5.7	3.7	6.0
36	Full Time c	SD	7.2	6.4	8.1	7.2	6.4	8.1	7.7	6.4	8.1
37	Relevant Work	Mean	3.1	2.1	4.5	3.0	2.1	4.5	5.3	2.1	4.5
38	Experience d	SD	5.2	4.4	7.1	5.7	4.3	7.1	5.7	4.4	7.1
39	Internal Applic.	Percent	2.1	3.0	0.6	1.6	2.5	0.0	16.7	15.8	18.2
	N		866	336	328	836	517	317	30	19	11

a   Years of education above Junior High level   c   Years of full time work experience
b   Months of part time or summer job experience   d   Years of work experience similar to the job applied for

TABLE 3

Number of Applicants, Percent Female, Number of Offers, Percent of Applicants with Offers, Percent Female among Those with Offers, for All Applicants and Separately by Sex

		All Applicants					Male Applicants			Female Applicants		
Position Number	Title	N	Percent Female	Number of Offers	Percent With Offers	Percent of Offers to Females	N	Number With Offers	Percent With Offers	N	Number With Offers	Percent With Offers
		1	2	3	4	5	6	7	8	9	10	11
PANEL A: SEPARATELY FOR EACH POSITION												
1	Product Developer	8	0.0	1	12.5	0.0	8	1	12.5	0	0	0.0
2	Marketing Manager	14	7.1	1	7.1	0.0	13	1	7.7	1	0	0.0
3	Sales Manager	15	13.3	1	6.7	0.0	13	1	7.7	2	0	0.0
4	Client Supporter	28	17.9	1	3.6	0.0	23	1	4.3	5	0	0.0
5	Consultant Risk Management	47	19.1	1	2.1	0.0	37	1	2.7	9	0	0.0
6	Marketing Manager	14	21.4	1	7.1	100.0	11	0	0.0	3	1	33.3
7	Administration and IC Manager	7	28.6	1	14.3	100.0	5	0	0.0	2	1	50.0
8	Financial Consultant	89	29.2	1	1.1	0.0	63	1	1.6	26	0	0.0
9	Journalist	77	36.4	1	1.3	100.0	49	0	0.0	28	1	3.6
10	Senior Consultant	13	46.2	1	7.7	100.0	7	0	0.0	6	1	16.7
11	Administrator of Orders	11	0.0	2	18.2	0.0	11	2	18.2	0	0	0.0
12	IT Consultant	23	8.7	2	8.7	0.0	20	2	10.0	2	0	0.0
13	Sales Manager	18	16.7	2	11.1	50.0	15	1	6.7	3	1	33.3
14	Secretary	112	94.6	2	1.8	100.0	6	0	0.0	106	2	1.9
15	Trainee	390	34.6	12	3.1	33.3	255	8	3.1	135	4	3.0
PANEL B: FOR NINE GROUPINGS OF POSITIONS												
All Positions												
1–15		866	37.9	30	3.5	36.7	536	19	3.5	328	11	3.4
Not 1, 11		847	38.7	27	3.2	44.0	517	16	3.1	328	11	3.4
Not 1, 11, 14		735	30.2	25	3.4	36.0	511	16	3.1	222	9	4.1
Positions with One Offer in Each												
1–10		312	26.4	10	3.2	40.0	229	6	2.6	82	4	4.9
2–10		304	37.1	9	3.0	44.4	221	5	2.3	82	4	4.9
Positions with Two Offers in Each												
11–14		164	68.1	8	4.9	37.5	52	5	9.6	111	3	2.7
12–14		153	73.0	6	3.9	50.0	41	3	7.3	111	3	2.7
12–13		41	14.3	4	4.9	25.0	35	3	8.6	5	1	20.0
Position with Twelve Offers												
15		390	34.6	12	3.1	33.3	255	8	3.1	135	4	3.0

Note: See Section 5 for discussion. For two applicants the sex was not known, so in positions 5 and 12 the total number of applicants in column 1 is bigger than the sum of the number of male and female applicants in columns 6 and 9. For Panel B, note this. In positions 1 and 11, there were no female applicants. The probability of a women getting an offer is hence 0, and no analysis of offer probability is needed. In position 14, 94.6% of applicants were female.

Distribution (Percent) on Getting Offer by Marital Status and Sex and by Number of
Children and Sex (In Parentheses Distribution on Marital Status and on Number of
Children, by Sex)

	Men		Women	
	% With Offer	Marital Status and Children	% With Offer	Marital Status and Children
	1	2	3	4
PANEL A:	All 15 Positions			
Marital Status				
Single	2.5	(52.6)	4.4	(41.8)
Married	4.5	(16.6)	1.4	(21.0)
Cohabitator	6.2	(15.1)	3.6	(17.1)
Divorced	0.0	(1.3)	12.5	(2.4)
Unknown	3.9	(14.4)	1.7	(17.7)
Sum		(100.0)		(100.0)
Number of Children				
0	3.2	(69.6)	3.6	(59.5)
1	8.3	(6.7)	7.4	(8.2)
2+	0.0	(7.8)	0.0	(12.8)
Unknown	4.7	(15.9)	3.1	(19.5)
Sum		(100.0)		(100.0)
PANEL B:	Not Positions 1, 11			
Marital Status				
Single	2.2	(52.8)	4.4	(41.8)
Married	3.6	(16.5)	1.4	(21.0)
Cohabitator	5.1	(15.1)	3.6	(17.1)
Divorced	0.0	(1.4)	12.5	(2.4)
Unknown	3.9	(14.7)	1.7	(17.7)
Sum		(100.0)		(100.0)
Number of Children				
0	2.8	(69.8)	3.6	(59.5)
1	8.6	(6.8)	7.4	(8.2)
2+	0.0	(7.5)	0.0	(12.8)
Unknown	3.7	(15.9)	3.1	(19.5)
Sum		(100.0)		(100.0)
PANEL C:	Not Positions 1, 11, 14			
Marital Status				
Single	2.2	(53.0)	4.5	(50.0)
Married	3.7	(15.6)	0.0	(11.7)
Cohabitator	5.1	(15.3)	4.4	(20.3)
Divorced	0.0	(1.4)	33.3	(1.4)
Unknown	4.0	(14.5)	2.7	(16.7)
Sum		(100.0)		(100.0)
Number of Children				
0	2.8	(70.1)	3.8	(71.2)
1	8.6	(6.8)	10.0	(4.5)
2+	0.0	(7.4)	0.0	(6.3)
Unknown	3.7	(15.7)	5.0	(18.0)
Sum		(100.0)		(100.0)

Note: For description of data see Section 3. For discussion of results see Section 6. Column 1 gives
the percent with an offer among men, first by marital status and next number of children. Column 3
gives the same percentages for women. Column 2 gives the distribution for men first on marital status
and second on number of children. Column 4 gives the same percentages for women.